



 PRODUCT-DETAILS

AF75-30-22 20-60V DC

AF75-30-22 20-60V DC Contactor



General Information

Extended Product Type	AF75-30-22 20-60V DC
Product ID	1SBL417001R7222
EAN	3471522236821
Catalog Description	AF75-30-22 20-60V DC Contactor

Long Description

AF75 contactors are mainly used for controlling 3-phase motors and generally for controlling power circuits up to 690 V AC and 220 V DC. The contactors can also be used for many other applications such as bypass, capacitor switching, lighting, DC power circuits... The AF... contactors are fitted with an electronic coil interface which accepts a wide control voltage range, on AC 50/60 Hz or DC supplies. The same contactor can accept various supply voltages according to the different countries where the electrical equipment will be installed, or some fluctuation in the control voltage due to the local supply or network. The AF... contactors are also fully suitable for operation in AC or DC control circuit liable to voltage interruptions or voltage dip risks. Advantages: - Wide voltage range, e.g. 100 ... 250 V AC and DC - Can manage large voltage variations - Reduced power consumption - Very distinct closing and opening - Noise free - Can withstand voltage interruptions or voltage dips in the control supply (≤ 20 ms). The AF... series 2-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles, 2nd stack with 4 built-in auxiliary contacts, front and side-mounted add-on auxiliary contact blocks - Control circuit: AC or DC operated - Accessories: a wide range of accessories is available.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

Popular Downloads

Data Sheet, Technical Information	1SNC001003C0202
Instructions and Manuals	FPTC407734P0003
CAD Dimensional Drawing	2CDC001079B0201

Dimensions

Product Net Width	70 mm
Product Net Depth / Length	140.3 mm
Product Net Height	110 mm
Product Net Weight	1.22 kg

Technical

Number of Main Contacts NO	3
Number of Main Contacts NC	0
Number of Auxiliary Contacts NO	2
Number of Auxiliary Contacts NC	2
Number of Poles	3P
Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL 508, CSA C22.2 No. 14, IEC 60077-1 (applicable parts), IEC 60077-2 (applicable parts), EN 50155 (applicable parts), TR CU 001/2011 (on request), IEC 61373, For compliance confirmation on applicable parts based on your application and combination, please consult your ABB sales representatives.
Rated Operational Voltage	Auxiliary Circuit 690 V Main Circuit 690 V
Rated Frequency (f)	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current (I _{th})	acc. to IEC 60947-4-1, Open Contactors $\Theta = 40^\circ\text{C}$ 125 A acc. to IEC 60947-5-1, $\Theta = 40^\circ\text{C}$ 16 A
Rated Operational Current AC-1 (I _e)	(690 V) 40 °C 125 A (690 V) 55 °C 105 A (690 V) 70 °C 85 A
Rated Operational Current AC-3 (I _e)	(415 V) 55 °C 72 A (440 V) 55 °C 70 A (500 V) 55 °C 65 A (690 V) 55 °C 46 A (380 / 400 V) 55 °C 75 A (220 / 230 / 240 V) 55 °C 75
Rated Operational Current AC-15 (I _e)	(500 V) 2 A (690 V) 2 A (24 / 127 V) 6 A (220 / 240 V) 4 A (380 / 400 V) 3 A
Rated Operational	(110 V) 2 Poles in Series, 40 °C 120 A

Current DC-1 (I_e)

(110 V) 2 Poles in Series, 55 °C 105 A
 (110 V) 2 Poles in Series, 70 °C 85 A
 (110 V) 3 Poles in Series, 40 °C 120 A
 (110 V) 3 Poles in Series, 55 °C 105 A
 (110 V) 3 Poles in Series, 70 °C 85 A
 (220 V) 3 Poles in Series, 40 °C 120 A
 (220 V) 3 Poles in Series, 55 °C 105 A
 (220 V) 3 Poles in Series, 70 °C 85 A
 (72 V) 1-Pole, 40 °C 120 A
 (72 V) 1-Pole, 55 °C 105 A
 (72 V) 1-Pole, 70 °C 85 A
 (72 V) 2 Poles in Series, 40 °C 120 A
 (72 V) 2 Poles in Series, 55 °C 105 A
 (72 V) 2 Poles in Series, 70 °C 85 A
 (72 V) 3 Poles in Series, 40 °C 120 A
 (72 V) 3 Poles in Series, 55 °C 105 A
 (72 V) 3 Poles in Series, 70 °C 85 A

Rated Operational
 Current DC-3 (I_e)

(110 V) 2 Poles in Series, 40 °C 120 A
 (110 V) 2 Poles in Series, 55 °C 105 A
 (110 V) 2 Poles in Series, 70 °C 85 A
 (110 V) 3 Poles in Series, 40 °C 120 A
 (110 V) 3 Poles in Series, 55 °C 105 A
 (110 V) 3 Poles in Series, 70 °C 85 A
 (220 V) 3 Poles in Series, 40 °C 120 A
 (220 V) 3 Poles in Series, 55 °C 105 A
 (220 V) 3 Poles in Series, 70 °C 85 A
 (72 V) 1-Pole, 40 °C 120 A
 (72 V) 1-Pole, 55 °C 105 A
 (72 V) 1-Pole, 70 °C 85 A
 (72 V) 2 Poles in Series, 40 °C 120 A
 (72 V) 2 Poles in Series, 55 °C 105 A
 (72 V) 2 Poles in Series, 70 °C 85 A
 (72 V) 3 Poles in Series, 40 °C 120 A
 (72 V) 3 Poles in Series, 55 °C 105 A
 (72 V) 3 Poles in Series, 70 °C 85 A

Rated Operational
 Current DC-5 (I_e)

(110 V) 2 Poles in Series, 40 °C 100 A
 (110 V) 2 Poles in Series, 55 °C 100 A
 (110 V) 2 Poles in Series, 70 °C 85 A
 (110 V) 3 Poles in Series, 40 °C 120 A
 (110 V) 3 Poles in Series, 55 °C 105 A
 (110 V) 3 Poles in Series, 70 °C 85 A
 (220 V) 3 Poles in Series, 40 °C 75 A
 (220 V) 3 Poles in Series, 55 °C 75 A
 (220 V) 3 Poles in Series, 70 °C 75 A
 (72 V) 1-Pole, 40 °C 75 A
 (72 V) 1-Pole, 55 °C 75 A
 (72 V) 1-Pole, 70 °C 75 A
 (72 V) 2 Poles in Series, 40 °C 120 A
 (72 V) 2 Poles in Series, 55 °C 105 A
 (72 V) 2 Poles in Series, 70 °C 85 A
 (72 V) 3 Poles in Series, 40 °C 120 A
 (72 V) 3 Poles in Series, 55 °C 105 A
 (72 V) 3 Poles in Series, 70 °C 85 A

Rated Operational
 Current DC-13 (I_e)

(24 V) 6 A / 144 W
 (48 V) 2.8 A / 134 W
 (72 V) 1 A / 72 W
 (110 V) 0.55 A / 60 W
 (125 V) 0.55 A / 69 W
 (220 V) 0.30 A / 66 W
 (250 V) 0.3 / 75 W

Rated Operational Power
 AC-3 (P_e)

(415 V) 40 kW
 (440 V) 40 kW
 (500 V) 45 kW
 (690 V) 40 kW
 (380 / 400 V) 37 kW
 (220 / 230 / 240 V) 22 kW

Rated Breaking Capacity
 AC-3

8 x I_e AC-3

Rated Making Capacity
 AC-3

10 x I_e AC-3

Short-Circuit Protective Devices	Auxiliary Circuit - gG Type Fuses 10 A gG Type Fuses 160 A
Rated Short-time Withstand Current Low Voltage (I_{cw})	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 650 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 135 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 250 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1000 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 370 A for 0.1 s 140 A for 1 s 100 A
Maximum Breaking Capacity	cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 440 V 1300 A cos phi=0.45 (cos phi=0.35 for $I_e > 100$ A) at 690 V 630 A
Rated Insulation Voltage (U_i)	acc. to IEC 60947-4-1 1000 V acc. to IEC 60947-5-1 690 V acc. to UL/CSA 600 V
Rated Impulse Withstand Voltage (U_{imp})	8 kV
Maximum Electrical Switching Frequency	(AC-1) 300 cycles per hour (AC-2 / AC-4) 150 cycles per hour (AC-3) 300 cycles per hour
Maximum Mechanical Switching Frequency	300 cycles per hour
Minimum Switching Capacity	17 / 5 VLT4K
Rated Control Circuit Voltage (U_c)	DC Operation 20 ... 60 V
Coil Consumption	Holding at Max. Rated Control Circuit Voltage 50 Hz 7 V·A Holding at Max. Rated Control Circuit Voltage 50 Hz 2.8 W Holding at Max. Rated Control Circuit Voltage 60 Hz 7 V·A Holding at Max. Rated Control Circuit Voltage 60 Hz 2.8 W Pull-in at Max. Rated Control Circuit Voltage 50 Hz 210 V·A Pull-in at Max. Rated Control Circuit Voltage 60 Hz 210 V·A
Power Loss	at Rated Operating Conditions per Pole 0.1 W at 6 A per Pole 0.1 W at Rated Operating Conditions AC-1 per Pole 7 W at Rated Operating Conditions AC-3 per Pole 2 W
Operate Time	Between Coil De-energization and NC Contact Closing 35 ... 115 ms Between Coil De-energization and NO Contact Opening 30 ... 110 ms Between Coil Energization and NC Contact Opening 27 ... 95 ms Between Coil Energization and NO Contact Closing 30 ... 100 ms
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH75-25 (75 x 25 mm Mounting Rail) acc. to IEC 60715
Mounting by Screws (not supplied)	2 x M6 Screws Placed Diagonally
Connecting Capacity Main Circuit	Flexible with Cable End 6 ... 16 mm ² Rigid Cable 6 ... 25 mm ²
Connecting Capacity Auxiliary Circuit	Flexible with Cable End 0.75 ... 2.5 mm ² Rigid Cable 1 ... 4 mm ²
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10
Connecting Terminals (delivered in open position) Main Poles	M 6 (+,-) pozidriv 2 screws with 1x (13 x 10 mm) connector
Terminal Type	Screw Terminals
Product Name	Block Contactor

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V
General Use Rating UL/CSA	(600 V AC) 105 A

Horsepower Rating UL/CSA	(200 ... 208 V AC) Three Phase 25 hp (220 ... 240 V AC) Three Phase 30 hp (440 ... 480 V AC) Three Phase 60 hp (550 ... 600 V AC) Three Phase 75 hp
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Environmental

Ambient Air Temperature	Close to Contactor Fitted with Thermal O/L Relay -25 ... 55 °C Close to Contactor without Thermal O/L Relay -40 ... 70 °C Close to Contactor for Storage -60 ... +80 °C
Climatic Withstand	according to IEC 60068-2-30 and 60068-2-11 - UTE C 63-100 Specification II
Maximum Operating Altitude Permissible	Without Derating 3000 m
Shock and Vibration Withstand acc. to IEC 61373	Category 1, Class B
Pollution Degree	3

Material Compliance

Conflict Minerals Reporting Template (CMRT)	9AKK108467A5658
REACH Declaration	2CMT2021-006202
RoHS Declaration	2CMT2021-006277
RoHS Information	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
SCIP	840573ef-33af-4491-953d-39e75c268e22 Bulgaria
Simplified SCIP	06fdebd7-7b7a-4065-b5dc-a12f57b8eae8 Hungary 131446ff-ab39-45e5-8f95-43047ef3e03f Germany 252cd6fc-35c5-429c-8723-3a47a63f522b France 2563ec09-09aa-4f90-988d-7d6049a67592 Germany 26da9b36-4b84-4658-ab94-2879c121a3b0 Netherlands 35614b94-4d60-4862-997a-98c4bfb478f4 Belgium 35a95817-f71b-4299-8a43-e14f5af38a66 Poland 39060c42-a578-4487-8252-64ca6a0af321 Spain 3b22b1be-82a6-45d8-b51a-5030a5cc18b3 Portugal 3b5c7e6d-498e-4f36-9bb5-6b7bae668406 France 4305426c-bd4d-45e1-9bf3-f850af227dab Hungary 44d7f83a-0850-4e66-8c08-59a10a595311 Italy 4ae2e66a-f87f-4597-bbfc-ff26c9f77ed5 Germany 7b41596d-bd7e-401d-9184-167b9648b715 Croatia a88b30f7-0d08-4025-bb51-d78069525556 Greece acf210d6-4253-4a6a-b9d0-8d6b687bec85 Norway b4b855cb-cdb3-429c-a20e-07bc98c1cd22 Sweden b740f2f2-44fe-4793-95e6-7bd472e376a6 Finland c23b1606-00b6-418e-8533-bf8541ee82b1 Poland c607918c-0c79-4c80-90d3-74b8450a5db4 Sweden d3307296-0bbc-4614-9cd7-0c0b741b8051 Estonia dc557c4d-7598-4dd6-9993-bd64cca95314 Denmark e167a223-0e66-43be-85d4-6e60e24be4ea Poland e50f02a4-998b-4627-8fa1-1255d91c9247 Czech Republic f07d4d06-01fc-46e8-914e-caa241857111 Belgium f322be70-955a-4f19-8218-6aa56220231b Germany fac17f99-cc24-4fb3-9b53-d939215ab88e Germany
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

ABB EcoSolutions

Environmental Product Declaration - EPD	No declaration needed
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Certificates and Declarations

CQC Certificate	CQC2018010304134049 CQC2010010304402983
Declaration of Conformity - CCC	2020980304001624 2020980304001225
Declaration of Conformity - CE	1SBD250803U1000
Declaration of Conformity - UKCA	1SBD250820U1000
RMRS Certificate	RMRS_1802704280
UL Certificate	UL-US-L312527-1101-21215991-6 UL-CA-2139468-4
UL Listing Card	UL_E312527

Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	142 mm
Package Level 1 Depth / Length	190 mm
Package Level 1 Height	136 mm
Package Level 1 Gross Weight	1.22 kg
Package Level 1 EAN	3471522236821

External Classifications and Standards

Object Classification Code	Q
ETIM 7	EC000066 - Power contactor, AC switching
ETIM 8	EC000066 - Power contactor, AC switching
ETIM 9	EC000066 - Power contactor, AC switching
eClass	V11.0 : 27371003
UNSPSC	39121529

Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors → AF Contactors → AF75

